

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of assigning objects to processing units of a cluster of processing units, ~~each one of~~ the processing units having ~~[[a]] storage capacity~~ capacities, the method being executed by a computer and comprising the steps of:

storing, in a storage device of the computer, the objects and the object sizes;
~~sorting of the objects by size to provide a sequence of objects; and for each processing unit of the cluster:~~

~~assigning of one of~~ the objects to the processing ~~[[unit]]~~ units starting with the largest object in the sequence until a remaining storage capacity of one of the processing ~~[[unit]]~~ units is below the smallest object of the sequence, wherein the remaining storage capacity is determined by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit; [[and]]

deleting, from the sequence, [[of]] the objects which [[are]] have been assigned to
~~a processing unit from the sequence;~~

determining, after assignment of the sequence of objects to the processing units,
a processing unit having a largest gap based on the aggregated size of the assigned objects and remaining storage capacities of the processing units;

dividing the largest gap with a minimum number of the processing units to which the objects have been assigned;

calculating a first threshold value by subtracting a result of the division from a storage capacity of the processing unit having the largest gap; and

reassigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one the processing units is below the smallest object of the sequence, wherein during reassignment the remaining storage capacity is the difference between an aggregated size of the objects being reassigned and the first threshold.

2. (Currently Amended) The method of claim 1, wherein the steps of assigning of ~~one or more of the objects to the processing unit starting with the largest object in the sequence until a remaining storage capacity of the processing unit is below the smallest object of the sequence~~ and deleting of the objects after assignment ~~which are assigned to a processing unit from the sequence~~ are carried out repeatedly until the sequence is empty which provides ~~[[a]]~~ the minimum number of the processing units required for the assignment.

3-6. (Cancelled).

7. (Currently Amended) The method of claim 1, further comprising the steps of:

stepwise varying a ~~third~~ second threshold between a first limit and a second limit; and for each processing unit of the cluster:

~~assigning of one or more~~ reassigning, based on the second threshold, at least one of the objects to one of the processing [[unit]] units starting with the largest object in the sequence until a remaining storage capacity of the processing unit is below the smallest object of the sequence, wherein the remaining storage capacity, during reassignment based on the second threshold value, is the difference between the aggregated size of the objects being reassigned and the second threshold; [[and]]

~~deleting, from the sequence, [[of]] the objects which are assigned~~ reassigned to a processing unit ~~from the sequence for each third~~ based on the second threshold value, ~~wherein the remaining storage capacity is the difference between the aggregated size of the objects being assigned to the processing unit and the third threshold, and wherein a statistical measure is calculated for the assignment~~ reassignment of objects to the processing unit; and

selecting of one of the ~~assignments~~ reassignments of the objects to processing units based on the statistical measure.

8. (Currently Amended) The method of claim 7, wherein the first limit is the aggregated size of the objects divided by the minimum number of processing units, and wherein the second limit is ~~[[the]]~~ a storage capacity of one of the processing units.

9. (Previously Presented) The method of claim 7, wherein the statistical measure is calculated by calculation of the standard deviation or the variance of the totals of the sizes of objects assigned to one processing unit.

10. (Previously Presented) The method of claim 1, wherein the objects are database tables of various sizes.

11. (Currently Amended) The method of claim 1, wherein [[each]] one of the processing units is a blade or a blade server.

12. (Currently Amended) A computer program product tangibly embodied in a computer-readable storage medium and comprising instructions which, when executed on a processor, causes the processor to perform a method for assigning objects to processing units of a cluster of processing units, ~~each one of the processing units having [[a]] storage capacities capacity, the computer program product comprising program means for performing the method comprising the steps of:~~

~~sorting of the objects by size to provide a sequence of objects; and for each processing unit of the cluster: assigning of one or more of the objects to the processing unit starting with the largest object in the sequence until a remaining storage capacity of the processing unit is below the smallest object of the sequence; and deleting of the objects which are assigned to a processing unit from the sequence~~

assigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the

smallest object of the sequence, wherein the remaining storage capacity is determined by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit;

deleting, from the sequence, the objects which have been assigned;

determining, after assignment of the sequence of objects to the processing units, a processing unit having a largest gap based on the aggregated size of the assigned objects and remaining storage capacities of the processing units;

dividing the largest gap with a minimum number of the processing units to which the objects have been assigned;

calculating a first threshold value by subtracting a result of the division from a storage capacity of the processing unit having the largest gap; and

reassigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one the processing units is below the smallest object of the sequence, wherein during reassignment the remaining storage capacity is the difference between an aggregated size of the objects being reassigned and the first threshold.

13. (Currently Amended) The computer program product of claim 12, the program means being adapted to repeatedly carry out ~~for each processing unit of the cluster:~~

assigning ~~of one or more~~ of the objects to the processing ~~[[unit]]~~ units starting with the largest object in the sequence until a remaining storage capacity of ~~[[the]]~~ one of the processing ~~[[unit]]~~ units is below the smallest object of the sequence; and

deleting ~~[[of]]~~ the objects which ~~[[are]]~~ have been assigned ~~to a processing unit~~
from the sequence until the sequence is empty; and
~~to output a~~ outputting the minimum number of the processing units, which are
required for the assignment of the objects.

14-16. (Cancelled).

17. (Currently Amended) The computer program product of claim 12, the
program means being adapted to perform the steps of:

stepwise varying a ~~third~~ second threshold between a first limit and a second
~~limits limit; for each processing unit of the cluster:~~

~~assigning of one or more~~ reassigning, based on the second threshold, at least
one of the objects to one of the processing [[unit]] units starting with the largest object in
the sequence until a remaining storage capacity of the processing unit is below the
smallest object of the sequence, wherein the remaining storage capacity, during
reassignment based on the second threshold value, is the difference between the
aggregated size of the objects being reassigned and the second threshold; [[and]]

~~deleting, from the sequence, [[of]] the objects which are assigned~~ reassigned to a
processing unit ~~from the sequence for each third~~ based on the second threshold value,
~~wherein the remaining storage capacity is the difference between the aggregated size of~~
~~the objects being assigned to the processing unit and the third threshold, and wherein a~~
statistical measure is calculated for the ~~assignment~~ reassignment of objects ~~to the~~
~~processing unit; and~~

selecting of one of the ~~assignments~~ reassignments of the objects to processing units based on the statistical measure.

18. (Currently Amended) A data processing system for assigning objects to ~~determining a minimum number of~~ processing units of a cluster of processing units, the processing units having storage capacities and the ~~for a given number of~~ objects having various sizes, the data processing system comprising:

means for storing the objects and the object sizes;

means for sorting of the objects by size to provide a sequence of objects;

means for assigning ~~of one or more of~~ the objects to a processing ~~[[unit]]~~ units starting with the largest object in the sequence until a remaining storage capacity of one of the processing ~~[[unit]]~~ units is below the smallest object of the sequence, wherein the remaining storage capacity is determined by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit; and ~~means for outputting of the minimum number of the processing units~~

means for deleting, from the sequence, objects which have been assigned;

means for determining, after assignment of the sequence of objects to the processing units, a processing unit having a largest gap based on the aggregated size of the assigned objects and remaining storage capacities of the processing units;

means for dividing the largest gap with a minimum number of the processing units to which the objects have been assigned;

means for calculating a first threshold value by subtracting a result of the division from a storage capacity of the processing unit having the largest gap; and
means for reassigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one the processing units is below the smallest object of the sequence, wherein during reassignment the remaining storage capacity is the difference between an aggregated size of the objects being reassigned and the first threshold.

19. (Original) The data processing system of claim 18, each processing unit being a single-board computer having a bus interface to a bus system that couples the single-board computers.

20. (Cancelled).

21. (New) A method of assigning objects to processing units of a cluster of processing units, the processing units having storage capacities, the method being executed by a computer and comprising the steps of:

storing, in a storage device of the computer, the objects and the object sizes;

sorting of the objects by size to provide a sequence of objects;

assigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity is determined

by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit;

deleting, from the sequence, the objects which have been assigned;

determining a total of the sizes of the objects;

determining a difference between a total of storage capacities of a minimum number of processing units and the total of the sizes of the objects;

subtracting the difference divided by the minimum number of processing units from the storage capacity to provide a threshold value;

reassigning, based on the threshold value, the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity, during reassignment, is determined by the difference between the aggregated size of the objects being reassigned to the one processing unit and the threshold value; and

deleting the objects which are reassigned from the sequence; and

dividing an excess amount by the minimum number of processing units and increasing the threshold value by the result of the division, when after the deleting of the reassigned objects there is an excess amount of memory requirement for one of the processing units which surpasses the storage capacity of the one processing unit,

wherein the steps of deleting the objects, dividing the excess amount by the minimum number of processing units, and increasing the threshold value are performed repeatedly until there is no such excess amount.

22. (New) The method of claim 21, wherein when there is no such excess amount but a gap, dividing the gap by the minimum number of processing units and decreasing the threshold value by the result of the division.

23. (New) The method of claim 21, wherein one of the processing units is a blade or a blade server.

24. (New) A computer program product tangibly embodied in a computer-readable storage medium and comprising instructions which, when executed on a processor, causes the processor to perform a method for assigning objects to processing units of a cluster of processing units, the processing units having storage capacities, the method comprising the steps of:

 sorting of the objects by size to provide a sequence of objects;

 assigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity is determined by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit;

 deleting, from the sequence, the objects which have been assigned;

 determining a total of the sizes of the objects;

 determining a difference between a total of storage capacities of a minimum number of processing units and the total of the sizes of the objects;

subtracting the difference divided by the minimum number of processing units from the storage capacity to provide a threshold value;

reassigning, based on the threshold value, the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity, during reassignment, is determined by the difference between the aggregated size of the objects being reassigned to the one processing unit and the threshold value;

deleting the objects which are reassigned from the sequence; and

dividing an excess amount by the minimum number of processing units and increasing the threshold value by the result of the division, when after the deleting of the reassigned objects there is an excess amount of memory requirement for one of the processing units which surpasses the storage capacity of the one processing unit,

wherein the steps of deleting the objects, dividing the excess amount by the minimum number of processing units, and increasing the threshold value are performed repeatedly until there is no such excess amount.

25. (New) The computer program product of claim 24, wherein one of the processing units is a blade or a blade server.

26. (New) A data processing system for determining a minimum number of processing units of a cluster of processing units for a given number of objects having various sizes, the data processing system comprising:

means for storing the objects and the object sizes;

means for sorting of the objects by size to provide a sequence of objects;

means for assigning the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity is determined by a difference between a storage capacity of the one processing unit and an aggregated size of objects being assigned to the one processing unit;

means for deleting, from the sequence, the objects which have been assigned;

means for determining a total of the sizes of the objects;

means for determining a difference between a total of storage capacities of a minimum number of processing units and the total of the sizes of the objects; and

means for subtracting the difference divided by the minimum number of processing units from the storage capacity to provide a threshold value;

means for reassigning, based on the threshold value, the objects to the processing units starting with the largest object in the sequence until a remaining storage capacity of one of the processing units is below the smallest object of the sequence, wherein the remaining storage capacity, during reassignment, is determined by the difference between the aggregated size of the objects being reassigned to the one processing unit and the threshold value;

means for deleting the objects which are reassigned from the sequence; and

means for dividing an excess amount by the minimum number of processing units and increasing the threshold value by the result of the division, when after the deleting of the reassigned objects there is an excess amount of memory requirement for

one of the processing units which surpasses the storage capacity of the one processing unit,

wherein the steps of deleting the objects, dividing the excess amount by the minimum number of processing units, and increasing the threshold value are performed repeatedly until there is no such excess amount.

27. (New) The data processing system of claim 26, wherein one of the processing units is a blade or a blade server.